

ABSTRACT OF THE DISCLOSURE

A method for forming a wear-resistant hardfaced contact area on the shroud section of a gas turbine engine blade. A predetermined contact area of a shroud section of a gas turbine engine blade is selectively coated with a high-density hardface coating material. The hardface coating material is capable of forming a diffusion boundary between the hardface coating material and the shroud section. A hot isostatic heat treatment process is performed to form the diffusion boundary between the hardface coating material and the shroud section to form a wear-resistant hardfaced contact area diffusion bonded to the shroud section. Depending on the coating process, and the necessity for doing so, the predetermined contact area can be masked off before the step of selectively coating. A sintering heat treatment can be performed before the step of performing the hot isostatic heat treatment to limit the occurrence bubbles on the surface of the hardface coating material after the isostatic heat treatment step. The sintering heat treatment may be performed at a temperature substantially the same as the temperature of the hot isostatic heat treatment. The hardface coating material may comprise an alloy with substantially no oxide forming constituents so as to avoid the formation of oxide inclusions in the coating material.